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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/548,031	04/12/2000	David Wiener	WIE-003	5389

7590 05/08/2003
David P Gordon Esq
65 Woods End Road
Stamford, CT 06905

EXAMINER

DABNEY, PHYLESHA LARVINIA

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 05/08/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/548,031

Applicant(s)

WIENER, DAVID

Examiner

Phylesha L Dabney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 4/14/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) 21-25,39,40,46-51 and 53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-20,26-38,41-45,52 and 54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/12/00 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

This action is in response to the election filed on 14 April 2003 in which claims 1-20, 26-38, 41-45, 52, and 54 are pending.

Applicant's election without traverse of claims 1-20, 26-38, 41-45, 52, and 54 in Paper No. 4 is acknowledged.

Claims 21-25, 39, 40, 46-51, 53 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 4.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "first duct having a substantially smaller cross section than the second duct" of claim 12 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

8/7/03
Amdt
pg. 20 1st P
Clarified.
OK.
✓

Claim Objections

2. Claim 12 is objected to because of the following informalities: The applicant states that the first duct cross-section is smaller than the second duct. The examiner requests that the

✓
see above.

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applicant explains how/why the first duct is smaller than the second duct. Appropriate correction is required.

3. Claims 15, 17, and 42 are objected to because of the following informalities: the examiner believes that the first securing ring should be coupled to the first duct. Appropriate correction is required.

OK
✓

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, and 4-5, are rejected under 35 U.S.C. 102(b) as being anticipated by Hass (U.S. Patent No. 4,070,553).

Regarding claims 1-2, Hass discloses the wearable speaker system comprising: a garment including a first duct (11) having lengthwise, widthwise, and heightwise dimensions (figs. 1-6, specifically fig. 4 shows height) which are perpendicular to each other, wherein the widthwise dimension and the heightwise dimension ratio is not more than three, the first duct defining a chamber; and at least one sound transducer in the duct.

Regarding claim 4, Hass discloses the at least one transducer comprises a first pair of transducers (13, 15), and the first pair of sound transducers face inward toward the body of the wearer (fig. 5).

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Regarding claim 5, Hass discloses the at least one transducer comprises a first pair of transducers, the first pair of transducers face outward toward an ear of the wearer (figures 3 and 5).

5. Claims 26-27, 30-33, 38, 41, 43-45, and 54 are rejected under 35 U.S.C. 102(b) as being anticipated by Boyden (U.S. Patent No. 5,815,579).

Regarding claim 26, Boyden discloses a wearable speaker system comprising: a garment (col. 2 lines 55-61) including at least a first duct (14, 24; 56, 58; 76; 84, 92; 102, 104; 306) having a first end and a second end and a chamber; first and second sound transducers (10, 12; 72, 74; 82, 90; 106, 108; 302, 304) mounted to the first and second ends of the duct respectively.

Regarding claim 27, Boyden discloses the first duct is adapted to flex without pinching off the first duct chamber (fig. 2; col. 5 lines 24-34; col. 13, lines 61-63).

Regarding claim 30, Boyden discloses the second transducer faces outward toward an ear of the wearer (see figures).

Regarding claim 31, Boyden discloses the garment is one of a jacket, vest, and a shirt. (col. 2 lines 55-61).

Regarding claim 32, Boyden discloses a second duct (14, 24; 56, 58; 76; 84, 92; 102, 104; 306) having first and second ends and a chamber attached to the garment; a third and fourth sound transducers (10, 12; 72, 74; 82, 90; 106, 108; 302, 304) mounted to the first and second ends of the duct respectively.

Regarding claim 33, Boyden discloses the second duct is adapted to flex without pinching off the second duct chamber (fig. 2; col. 5 lines 24-34; col. 13, lines 61-63).

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Regarding claim 38, Boyden discloses the garment has a collar and one of the first and second duct is attached to the collar of the garment (lapel, col. 5 lines 41-44).

Regarding claim 41, Boyden discloses the second duct defines at least one port (vent, col. 2 lines 43-54).

Regarding claim 43, Boyden discloses the speaker system comprising: an audio player (col. 2 lines 64-67); and a transducer wire coupled to each of the sound transducers (col. 8 lines 21-27).

Regarding claim 44, Boyden discloses the audio player positioned in a pocket of the garment (col. 2 lines 64-67; col. 8 lines 21-26; col. 14 lines 3-9).

Regarding claim 45, Boyden discloses the second duct crosses one of the shoulders of the garment (figures 6-8).

Regarding claim 54, as shown in figures 1 and 5-16, Boyden discloses a modular personal wearable speaker system attachable to a garment and for use with a portable player, comprising: a plurality of ducts (14, 24; 56, 58; 76; 84, 92; 102, 104; 306) having a first end and a second end and defining a chamber there between; a plurality of sound transducers (10, 12; 72, 74; 82, 90; 106, 108; 302, 304), the ducts each defining an opening into the chamber (fig. 1, shows the chamber), the opening adapted to receive at least one of the sound transducers, wherein the ducts (fig. 1, 5-16, ducts in multiple configurations) are adapted to be interchangeably coupled to the garment, the transducers are adapted to be interchangeably coupled to the ducts (figs. 5-16, multiple speaker configurations; one or more transducers, col. 7 lines 21-29).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, 6-9, 12-14, 16, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldron (U.S. Patent No. 4,589,134).

Regarding claim 1, Waldron teaches a wearable speaker system comprising: a garment including a first duct (fig. 1 and 2 filled with transducer and pile), having lengthwise, widthwise, and heightwise dimensions which are perpendicular to each other, defining a chamber (15, 16), and at least one sound transducer (20, 21) mounted in the duct. Waldron does not teach the widthwise dimension to the heightwise dimension ratio is not more than three to one. However, the examiner takes official notice that it is known to vary the height dimension by adding different amounts of pile filler to achieve lightweight or bulky insulating garments; therefore, it would be within the level of ordinary skill in the art to achieve and widthwise to heightwise ratio of no more than three to one to achieve a specific degree of insulation. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the garment of Waldron with a widthwise to heightwise ratio of not more than 3 for the reason stated above.

Regarding claims 3 and 9, Waldron does not teach the first (claim 3) or second duct (claim 9) having a substantially round cross-section, but Waldron does teach adding filler (17, pile). The examiner takes official notice that it is known in the art to include enough filler, such

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that a round cross-section is produced, for insulation purposes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a round cross-section by including filler in the invention of Waldron for insulation purposes.

Regarding claim 6, Waldron teaches the garment is a jacket, a vest, or a coat (col. 2 lines 46-50).

Regarding claim 7, Waldron teaches the garment has a second duct having a first end and a second end, the second duct defining a second duct chamber, and at least one second sound transducer mounted in the second duct.

Regarding claim 8, Waldron teaches the second duct is adapted to flex without pinching off said second chamber.

Regarding claim 12, Waldron does not teach the first duct having an area substantially smaller than a cross-section through the second duct, but Waldron does teach adding filler (17, pile). The examiner takes official notice that it is known in the art to include varying amounts of filler, such that different cross-sections are produced, for changing the damping of one enclosed speaker relative to the other. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have different cross sections produced for the first duct relative to the second duct in the invention of Waldron for changing the damping (attenuation of one enclosed speaker relative to the other).

Regarding claim 13, Waldron teaches one of the first and second duct is attached to the collar of the garment (fig. 1-2, ducts extends out from collar).

Regarding claim 14, Waldron teaches the second duct has a cover at least partially around the second duct (top portion of 16).

Regarding claim 16, Waldron teaches the second duct defines at least one port (30).

Regarding claim 18, Waldron teaches an audio player (23) and transducer wires (26, 27).

Regarding claim 19, Waldron teaches the audio player positioned within a pocket (22).

7. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldron (U.S. Patent No. 4,589,134), in view of Boyden (U.S. Patent No. 5,815,579), and in further view of Hass (U.S. Patent No. 4,070,553).

Regarding claim 10, Waldron teaches the garment has a second duct having a second sound transducer. Waldron does not teach the second sound transducer comprising a second pair of sound transducers. Boyden teaches having a pair of second sound transducers incorporated in the garment for increased audio output. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a pair of second sound transducers in the invention of Waldron, as taught by Boyden for increased audio output. The combination of Waldron and Boyden does not teach facing the pair of sound transducers inward toward the body. Hass teaches facing the pair of sound transducers facing inward toward the body of the wearer for controlling sound radiation (col. 5 lines 9-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to position the first pair of transducers inward in the combination of Waldron and Boyden, as taught by Hass, for controlling the radiation of sound.

Regarding claim 11, see the rejection of claim 10 with respect to first and second pairs of sound transducers being included and facing inward for the same reason as taught by the combination of references.

8. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldron (U.S. Patent No. 4,589,134), in view of Campbell (U.S. Patent No. 4,343,158).

Regarding claims 15 and 17, Waldron teaches a first securing element (Velcro, col. 2 lines 56-61) coupled to the cover (top portion of 16) adjacent the first end of the first duct and a second securing element (Velcro, col. 2 lines 56-61) coupled to the cover adjacent the second end of the second duct, the first and second elements being detachably coupled to the garment and at least partially securing the second duct to the garment. Waldron does not specifically teach that the securing element for securing the first and second ducts is formed in a ring. In a similar field of endeavor, Campbell teaches a securing element (Velcro strip) formed around the periphery (ring formation) for providing a releasable enclosure (col. 3 lines 3-6). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include ring shaped securing elements in the Waldron, as taught by Campbell, for incorporating patch and latch means in a single releasable (detachable) strip.

9. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Waldron (U.S. Patent No. 4,589,134), in view of Boyden (U.S. Patent No. 5,815,579).

Regarding claim 20, Waldron does not teach the second duct crossing one of the shoulders of the garment. Boyden teaches the second duct crossing one of the shoulders of the garment (figs. 6-8) which changes the parameters (length, width, height; col. 4 lines 24-40) of the enclosure (duct) for changing the amount of attenuation (filtering) applied to the acoustic signal to affect the turnover frequency produced by the system. Therefore, it would have been

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obvious to one of ordinary skill in the art at the time the invention was made to allow the second duct of Waldron to cross-over a shoulder of the garment, as taught by Boyden, for altering the turnover frequency produced.

10. Claims 28, 37, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyden (U.S. Patent No. 5,815,579).

Regarding claim 28, Boyden does not teach the first duct having a substantially round cross-section, but Boyden does teach adding filler (acoustic transparent material). The examiner takes official notice that it is known in the art to include enough filler, such that a round cross-section is produced, for insulation purposes. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a round cross-section by including filler in the invention of Boyden for insulation purposes.

Regarding claim 37, Boyden discloses a cross-section through the first duct has an area substantially smaller than a cross-section through the second duct. Boyden does not teach the first duct having an area substantially smaller than a cross-section through the second duct, but Boyden does teach adding filler (acoustic transparent filler). The examiner takes official notice that it is known in the art to include varying amounts of filler, such that different cross-sections are produced, for changing the damping of one enclosed speaker relative to the other. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have different cross sections produced for the first duct relative to the second duct in the invention of Bolden for changing the damping attenuation of one enclosed speaker relative to the other.

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Regarding claim 42, Boyden does not teach a first securing ring is coupled to the first duct adjacent the first end and a second securing ring is coupled to the second duct adjacent the second end, the first and second rings each being detachably coupled to the garment and at least partially securing the second duct to the garment. However, the examiner takes official notice that it would have been obvious to one of ordinary skill in the art at the time the invention was to include first and second securing rings at the first and second duct respectively, for reinforcing the location where a component would be attached to prevent tearing of the garment. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include first and second securing rings in the invention of Boyden for reinforcement.

11. Claims 29, and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyden (U.S. Patent No. 5,815,579) in view of Hass (U.S. Patent No. 4,070,553).

Regarding claim 29, Boyden does not teach facing the pair of sound transducers inward toward the body. Hass teaches facing the pair of sound transducers (13, 15) facing inward toward the body (fig. 5) of the wearer for controlling sound radiation (col. 5 lines 9-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to position the first pair of transducers inward in the invention of Boyden, as taught by Hass, for controlling the radiation of sound.

Regarding claim 34, Boyden does not teach the second duct having a substantially round cross-section, but Boyden does teach adding filler (acoustic transparent material). The examiner takes official notice that it is known in the art to include enough filler, such that a round cross-section is produced, for insulation purposes. Therefore, it would have been obvious to one of

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ordinary skill in the art at the time the invention was made to have a round cross-section by including filler in the invention of Boyden for insulation purposes.

Regarding claim 35, Boyden teaches having discloses the garment is worn by a wearer, at least one of the second and fourth transducers face inward toward a body of the wearer. Hass teaches facing the pair of sound transducers facing inward toward the ear of the wearer for controlling sound radiation (fig. 5; col. 5 lines 9-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to position the first pair of transducers inward in the invention of Boyden, as taught by Hass, for controlling the radiation of sound.

Regarding claim 36, Boyden discloses the garment is worn by a wearer, both of the second and fourth transducers face inward toward a body of the wearer. Hass teaches facing the pair of sound transducers facing inward toward the ear of the wearer for controlling sound radiation (fig. 5; col. 5 lines 9-16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to position the first pair of transducers inward in the invention of Boyden, as taught by Hass, for controlling the radiation of sound.

12. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boyden (U.S. Patent No. 5,815,579), in view of Leonard et al (U.S. Patent No. 4,603,327).

Regarding claim 52, Boyden teaches a garment having a duct (10, 24; 56, 58; 76; 84, 92; 102, 104; 306) defining a duct chamber, at least one sound transducer (10, 12; 72, 74; 82, 90; 106, 108; 302, 304) mounted in the duct electrically connected to the player (col. 2 lines 64-67 and col. 8 lines 21-27). Boyden does not teach any specifics of how an electrical connection is

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provided. In a similar field of endeavor, Leonard et al teaches an electrical connection provided via first and second zipper portions for engagement or disengagement of an electrical circuit path thus functioning as a circuit breaker in a garment. Therefore, it would have been obvious to one of ordinary skill in the art to use first and second zipper portions to provide the electrical connection in Boyden, as taught by Leonard, for allowing and terminating the audio signal to the sound transducers.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phylesha L Dabney whose telephone number is 703-306-5415. The examiner can normally be reached on Mondays, Tuesdays, Wednesdays, Fridays 8:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9314, for formal communications intended for entry and for informal or draft communications, please label "Proposed" or "Draft" when submitting an informal amendment.

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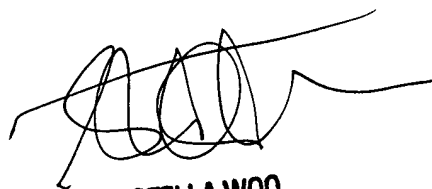
(703) 306-0377, for customer service questions.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

PLD



April 27, 2003



STELLA WOO
PRIMARY EXAMINER